UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

MEMORANDUM

SUBJECT: Request for Approval of Record of Decision
Findett/Huster Road Substation
St. Charles, St. Charles County, Missouri

FROM: Clint Sperry, Remedial Project Manager
Site Remediation Branch

Clint Sperry Digitally signed by Clint Sperry Date: 2021.06.30 07:16:19 -05'00'

THRU: Lynn M. Juett, Chief
Site Remediation Branch

TO: Mary P. Peterson, Director
Superfund and Emergency Management Division

Attached for your approval is the Record of Decision (ROD) for Operable Unit 4 (OU4) of the Findett/Huster Road Substation Site in St. Charles, Missouri. This ROD identifies the selected remedy for cleaning up contaminated groundwater at OU4 and provides the rationale for this decision.

OU4 is an active electrical distribution and transmission substation. It was originally constructed in 1963 and with subsequent expansions now encompasses approximately 8 acres. The substation is surrounded by a 12-foot flood protection berm and is fenced with a locking gate. OU4 is situated within the Missouri River alluvial valley from which the city of St. Charles receives its drinking water.

OU4 addresses groundwater contaminated with volatile organic compounds at the Ameren Missouri Huster Road Substation (Substation). The Selected Remedy is enhanced in-situ bioaugmentation attenuation and groundwater extraction and treatment system (GETS), as needed; and institutional controls (ICs).

Most of the elements of the Selected Remedy were started as part of four pilot studies conducted between 2014 and 2018. The work performed during the pilot studies has reduced the size of the groundwater plume to a small area within the Substation. All groundwater north of the Substation is below the Safe Drinking Water Act maximum contaminant levels (MCLs) for all site contaminants of concern (COCs). For soil, although subsurface concentrations of some COCs at the Substation were elevated prior to the pilot studies, none of the concentrations detected after completion of the pilot studies pose unacceptable human health risks when compared to the EPA's risk-based Regional Screening Levels for a residential exposure scenario.

The Selected Remedy includes the following:

- Naturally occurring *Dehalococcoides,* an anerobic bacteria capable of reductive dechlorination, along with nutrients to support the bacteria (enhanced bioaugmentation), have been injected

downgradient from the Substation's transformer number 2, creating an attenuation zone that reduces COCs as groundwater passes through the zone.

- The existing GETS, in operation since 2014, can be placed in stand-by status to allow the enhanced bioaugmentation to continue to reduce the contaminant plume. While in standby status, inspection and maintenance of the GETS may be necessary to keep the system operational.
- Ongoing monitoring will be performed to confirm ongoing degradation of the COCs and evaluate the need for additional bioaugmentation. Wells demonstrating compliance with the MCLs for an extended period and no longer needed for monitoring will be removed from monitoring and abandoned in accordance with state requirements. The specific wells designated for this purpose will be identified in a groundwater monitoring plan.
- A remedial action of restarting the GETS, or additional enhanced bioaugmentation, or a combination of the two, must be implemented if an MCL is exceeded for one event for any COC found in groundwater outside of the Substation, or if there is an increasing Mann-Kendall[1] trend of any COC in groundwater inside the Substation for four consecutive quarters. The GETS and/or enhanced bioaugmentation would continue to be implemented until the groundwater COCs show a declining Mann-Kendall trend for four consecutive quarters.
- ICs in the form of an environmental covenant or other equivalent proprietary control will be executed and filed with the Recorder of Deeds Office, prohibiting the installation of potable water wells within or near the contaminant plume and construction of buildings within the Substation without prior notification of and approval by the EPA and the state.
- Engineering controls such as site or area berms and fencing to control exposure pathways will be implemented as needed. To ensure that public access to OU4 remains restricted, security measures will continue to be taken and documented at OU4, including fencing, locked gates, and access restricted to approved personnel.

In addition, this ROD summarizes the results from the remedial investigation and baseline risk assessment, which concluded that levels of chlorinated solvents in groundwater exceed their respective MCLs and pose a threat if the groundwater is not restored to beneficial use (i.e., drinking water use). Current estimates indicate that cleanup levels will be attained throughout the contaminated portion of the aquifer within a reasonable time frame of less than ten years. The total present worth cost for the Selected Remedy is $265,000.

The Missouri Department of Natural Resources is the support agency and concurred with the preferred remedial alternative in the Proposed Plan. Verbally and by email, the program staff and managers have told us they are preparing a letter of concurrence with the Selected Remedy for their Acting Director's signature. However, their email states that they don't anticipate getting the signed letter to us until after June 30.

Attachment

[1] The Mann-Kendall Trend Test is used to analyze data collected over time for consistently increasing or decreasing trends.